

ABSTRACT

The present invention includes a power drive electronics apparatus connected between a frequency variable generator and an electric motor. The power drive electronics apparatus includes a three-phase diode rectifier having a three-phase AC input, a positive DC output terminal and a negative DC output terminal. A capacitor is connected between the positive DC output terminal and said negative DC output terminal. The three-phase AC input is operably connected to the electric motor and the positive DC output terminal is operably connected to the frequency variable generator's rotor winding. The power drive apparatus also includes a diode having an anode and a cathode, wherein the cathode is connected to the positive DC output terminal of the three-phase diode rectifier, and the anode is connected to a battery.